

Zhuoyang JIANG

Homepage | [LinkedIn](#) | Tel: (+86) 136-0871-6089 | E-mail: zjiang496@connect.hkust-gz.edu.cn

EDUCATION

The Hong Kong University of Science and Technology, China Sep. 2023 – Jun. 2025
MSc in Data-Centric AI Technology (DCAI) | GPA: 3.74/4.3 | Thesis Advisor: [Prof Lei Chen](#)
Southeast University, China Sep. 2019 – Jun. 2023
BEng in Artificial Intelligence | GPA: 3.35/4.0 | Thesis Advisor: [Prof Conghui Zhou](#)

WORK EXPERIENCE

CityMind Lab - HKUST (GZ) | Research Assistant Nov. 2025 – Now
• Mentored by [Prof Yuxuan Liang](#). Conducting research and development of Urban Foundation Model.
Zhongguancun Academy | Research Intern Aug. 2025 – Nov. 2025
• Mentored by [Dr Peiran Jin](#). Conducted research on graph representation learning.
Microsoft Research AI for Science | Research Intern Aug. 2024 – Jun. 2025
• Mentored by [Dr Haiguang Liu](#) and [Dr Yaosen Min](#). Conducted research on Science Foundation Model (SFM) and its Agentic System (Scientific Copilot).

SELECTED PUBLICATION

- **Zhuoyang Jiang**, Dongqing Zhang. [Space Syntax-guided Post-training for Residential Floor Plan Generation](#) [J] (Preprint). Submitted to **Automation in Construction** (JCR Q1, IF=9.6), 2026
 - Yanting Li*, **Zhuoyang Jiang***, Enyan Dai, Li Liu. [CAGenMol: Condition-Aware Diffusion Language Model for Goal-Directed Molecular Generation](#) [C]. **ACL Findings** (CORE A*), 2026. *Equal contribution.
 - **Zhuoyang Jiang**, Yaosen Min, Peiran Jin, Lei Chen. [Multi-scale Graph Autoregressive Modeling: Molecular Property Prediction via Next Token Prediction](#) [C] (Preprint). Targeting **KDD** (CORE A*), 2026
 - Conghui Zhou, Liuyi Yang, **Zhuoyang Jiang**[†], Xinyu Wu. [A Deep Learning Approach to Identify Potential Sites for Pocket Park Installation in Nanjing, China](#) [J]. **Journal of Urban Technology** (JCR Q1, IF=4.4), 2024.
- [†] As the sole AI contributor; the other authors contributed urban-planning expertise.

RESEARCH EXPERIENCE

Structure Representation Learning (RepL) And Generation | Methodological Foundation
HKUST DCAI Master's Thesis Project, jointly advised by [Microsoft Research](#) Aug. 2024 – Nov. 2025
• Investigated structure-aware representation and generation in foundation models through molecular graphs, establishing transferable methods for future research on multi-scale spatial structures in the built environment.
• Introduced CamS, a multi-scale graph representation method that strengthens structural awareness in FMs, achieving SOTA-level molecular property prediction performance; led to a paper targeting a CORE-A* conference.
• Introduced CAGenMol, a high-performance conditional molecular generation framework based on diffusion language models, reinforcement learning, and evolutionary optimization; accepted by ACL Findings 2026 (CORE-A*).

Spatial RepL and Post-training for Floorplan Generation | AI4Built-Environment → Building Scale
Project at [CAUP, Tongji University](#), jointly with [Dr. Dongqing Zhang](#) Sep. 2025 – Now
• An AI for Built Environment exploration focused on the building scale.
• Innovatively introduced SSPT, the first Space Syntax-guided Post-training paradigm for floorplan generation; produced one submitted JCR Q1 paper.
• Designed SGTok, an enhanced RepL method for floorplan generation under an autoregressive foundation-model paradigm; targeting one CORE A* conference paper.

Intelligent Pocket Park Planning in High-density Cities | AI4Built-Environment → Urban Scale
SEU AI Undergraduate Thesis Project, jointly advised by [School of Architecture, SEU](#) Nov. 2021 – Feb. 2024
• The first end-to-end deep learning (DL) approach based on Street View Image (SVI) for the Pocket Park Site Selection. Constructed a database with 458019 SVIs, an annotation method based on TrueSkill and a Three-Angle SVI EfficientNet. Co-produced two patents and one JCR Q1 publication (Research visual selected as journal cover).

Unified Spatial RepL for Urban Foundation Models | AI4Built-Environment → Urban Scale
Project at CityMind Lab, supervised by Prof Yuxuan Liang Nov. 2025 – Now

- An AI for Built Environment exploration focused on the urban scale.
- Developing advanced RepL methods for urban network structures and multimodal data, and leveraging a multi-agent architecture to collaboratively process heterogeneous data for complex multimodal urban understanding tasks.

RepL of Human-like Micro-behaviors | AI4Built-Environment → Human Behavior
Part-time Exploratory Project at APEX Lab, supervised by Prof Mingming Fan Feb. 2024 – Now

- An exploration of RepL for human-like micro-behaviors in embodied agents.
- Constructing a behavioral Tokenizer leveraging temporal signals to interpret the cognitive significance of linguistic micro-behaviors, e.g., conversational pauses, enabling agents to naturally exhibit these behaviors in both Agent-Agent and Human-Agent interactions.

ADDITIONAL PROJECT

Integrated Tokenizer for Molecular VAE | Tokenizer Design Jan. 2024 – Jul. 2024

- Details: <https://github.com/Jonarck/AI4Sci-MiCaM-EnsembleParadigm1>

Data Mining in A-share News | Framework Design&Full-stack Development Oct. 2023 – Dec. 2023

- Details: https://github.com/Jonarck/Data-Mining-and-Knowledge-Discovery-in-A_share-News

Low-cost Military KBQA | Framework Design&Knowledge Extraction/Fusion Mar. 2022 – Jul. 2022

- Details: <https://github.com/Jonarck/Knowledge-Extraction-and-Fusion-in-Low-cost-Military-KBQA>

SKILLS

- **ENGLISH:** IELTS: 7.0(6.0) (2023.09)
- **PROGRAMMING:** Python, C/C++, Matlab, etc.
- **DL FRAMEWORK/DevOps:** PyTorch/TensorFlow/MXNet, Ubuntu, git, L^AT_EX, etc.

HOBBIES

- Architecture & Cultural Heritage: Exploring Over 700 National Cultural Heritage Sites in China;
- Reading & Poetry: Served as the member of Yunnan Poetry Association; Established a reading club in high school;
- Art & Speaking: Invited to speak at TEDxSEU on how to connect with the world through my "art hobbies"